



PATENT  
Docket No. 110.02150101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): BISCHOF et al. ) Group Art Unit: 3739  
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Serial No.: 10/810,956       ) Examiner: Alex B. Toy  
Confirmation No.: 9825       )  
                                  )  
Filed: March 26, 2004       )  
                                  )  
For: THERMAL SURGICAL PROCEDURES AND COMPOSITIONS

**RESPONSE**

Commissioner for Patents  
Mail Stop Amendment  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The Office Action mailed November 10, 2005 has been received and reviewed. Claims 1-31 remain pending, with claims 7-31 withdrawn in view of Applicant's election of Group I, claims 1-6.

Applicant respectfully requests reconsideration and withdrawal of the rejections of claims 1-6 as discussed herein.

**Lentz in view of Gudov et al.**

Claims 1 and 3-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lentz (U.S. Patent No. 6,231,536) in view of Gudov et al. (U.S. Patent No. 5,067,952). Applicants respectfully traverse this rejection.

In order to establish a *prima facie* case of obviousness, the Examiner must establish that there is a motivation to combine the documents (or modify the teachings of a document) to achieve the claimed invention, with a reasonable expectation of success. Further, the references must teach or suggest every element of the claimed invention. For at least the reasons set forth below, it is respectfully submitted that the Examiner has failed to make the requisite showing of a *prima facie* case of obviousness.

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Lentz teaches a method to treat cancer through stimulation of a patient's immune system to attack solid tumors by using ultrapheresis (Lentz, Abstract). The ultrapheresis treatment of Lentz may be "combined with an alternative therapy, for example, treatment with an anti-angiogenic compound, one or more cytokines such as TNF, gamma interferon, other interferons, or IL-2, or a procoagulant compound." (Lentz, Abstract and col. 2, lines 26-30). "Alternatively, the ultrapheresis treatment [of Lentz] can be combined with local chemotherapy, systemic chemotherapy, and/or radiation." (Lentz, Abstract and col. 2, lines 37-39).

As support for this rejection, it is asserted that one could substitute the electromagnetic radiation treatments of Gudov et al. for the radiation recited in Lentz because "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used electromagnetic radiation in the invention of Lentz to adjust the temperature of the identified biological material, wherein at least a portion of the biological material is destroyed...." Office Action, p. 3.

The basis for modifying the methods of Lentz to include the electromagnetic radiation of Gudov et al. is the assertion that "Lentz discloses treating the biological material with radiation but is silent on the specific type of radiation." Office Action, p. 3. Applicant respectfully disagrees.

Lentz is not silent as to the type of radiation treatment contemplated. As recited in Lentz, "[u]ltrapheresis allows the use of lower doses of radiation to kill residual tumor cells and spare normal tissue." Lentz, col. 7, lines 32-34. Lentz also notes that "radiation therapy generates carbonium ions in tissue." Lentz, col. 7, lines 39-40. In other words, the type of radiation treatments contemplated by Lentz are those that can be characterized as being delivered in "doses" and that generate carbonium ions. Gudov et al. does not teach that the electromagnetic radiation treatments disclosed therein have the same effect, i.e., that they generate carbonium ions. As a result, the Office Action fails to establish that the electromagnetic radiation treatments of Gudov et al. can be freely substituted for the "radiation" treatments recited by Lentz.

For at least the above reason, Applicant respectfully submits that a *prima facie* case of obviousness has not been established for claims 1 and 3-6 over Lentz in view of Gudov et al. Reconsideration and withdrawal of this rejection of claims 1 and 3-6 are respectfully requested.

**Lentz in View of Marchenko et al.**

Claims 1 and 2 were rejected under 35 U.S.C. §103(a) as being unpatentable over Lentz (U.S. Patent No. 6,231,536) in view of Marchenko (U.S. Patent No. 4,528,979). Applicants respectfully traverse this rejection.

In order to establish a *prima facie* case of obviousness, the Examiner must establish that there is a motivation to combine the documents (or modify the teachings of a document) to achieve the claimed invention, with a reasonable expectation of success. Further, the references must teach or suggest every element of the claimed invention. For at least the reasons set forth below, it is respectfully submitted that the Examiner has failed to make the requisite showing of a *prima facie* case of obviousness.

Lentz teaches a method to treat cancer through stimulation of a patient's immune system to attack solid tumors by using ultrapheresis (Lentz, Abstract). The ultrapheresis treatment of Lentz may be "combined with an alternative therapy, for example, treatment with an anti-angiogenic compound, one or more cytokines such as TNF, gamma interferon, other interferons, or IL-2, or a procoagulant compound." (Lentz, Abstract and col. 2, lines 26-30). "Alternatively, the ultrapheresis treatment [of Lentz] can be combined with local chemotherapy, systemic chemotherapy, and/or radiation." (Lentz, Abstract and col. 2, lines 37-39).

As support for this rejection, it is asserted that one could substitute the cryo-ultrasonic radiation treatments of Marchenko et al. for the radiation recited in Lentz because "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used cryo-ultrasonic radiation in the invention of Lentz to adjust the temperature of the identified biological material, wherein at least a portion of the biological material is destroyed...." Office Action, p. 5.

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The basis for modifying the methods of Lentz to include the cryo-ultrasonic radiation treatments of Marchenko et al. is the assertion that "Lentz discloses treating the biological material with radiation but is silent on the specific type of radiation." Office Action, p. 5. Applicant respectfully disagrees.

Lentz is not silent as to the type of radiation treatment contemplated. As recited in Lentz, "[u]ltrapheresis allows the use of lower doses of radiation to kill residual tumor cells and spare normal tissue." Lentz, col. 7, lines 32-34. Lentz also notes that "radiation therapy generates carbonium ions in tissue." Lentz, col. 7, lines 39-40. In other words, the type of radiation treatments contemplated by Lentz are those that can be characterized as being delivered in "doses" and that generate carbonium ions. Marchenko et al. does not teach that the electromagnetic radiation treatments disclosed therein have the same effect, i.e., that they generate carbonium ions. As a result, the Office Action fails to establish that the electromagnetic radiation treatments of Marchenko et al. can be substituted for the "radiation" treatments recited by Lentz.

For at least the above reason, Applicant respectfully submits that a *prima facie* case of obviousness has not been established for claims 1 and 2 over Lentz in view of Marchenko et al. Reconsideration and withdrawal of this rejection of claims 1 and 2 are respectfully requested.

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**Summary**

It is respectfully submitted that the pending claims 1-6 are in condition for allowance and notification to that effect is respectfully requested.

The Examiner is invited to contact Applicants' Representatives at the telephone number listed below if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted by

Mueting, Raasch & Gebhardt, P.A.  
P.O. Box 581415  
Minneapolis, MN 55458-1415  
Phone: (612) 305-1220  
Facsimile: (612) 305-1228  
**Customer Number 26813**

By:   
Kevin W. Raasch  
Reg. No. 35,651  
Direct Dial (612) 305-1218

February 9, 2006  
Date

KWR/skd

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**CERTIFICATE UNDER 37 CFR §1.10:**

"Express Mail" mailing label number: EV 201875805 US Date of Deposit: February 9, 2006  
The undersigned hereby certifies that this paper is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By: Deb Schurmann  
Name: Deb Schurmann

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